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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/848,843	05/19/2004	Yung Yip	10435US01	6959

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Attention: Eric D. Levinson  
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EXAMINER

EVANS, JEFFERSON A

ART UNIT PAPER NUMBER

2627

DATE MAILED: 09/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/848,843

**Applicant(s)**

YIP, YUNG

**Examiner**

Jefferson A. Evans

**Art Unit**

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-18 and 20 is/are rejected.
- 7) ☒ Claim(s) 9 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 5-19-2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____.  | 6) <input type="checkbox"/> Other: ____.                          |

Claims 1 to 20 are pending.

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the subject matter of claim 17 having a system including a first thin film servo head apparatus and a second thin film servo head apparatus such that the the second thin film servo head apparatus with a substrate not canted relative to transverse direction of the magnetic tape must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 4, 6, 7, 10, 14-16, 18, and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Schwarz et al (U.S. 6,947,247). Schwarz discloses a servo head apparatus wherein each head module includes plural servo heads for reading data from servo tracks (column 14 – lines 17 and 18). The heads may be thin film heads (column 14 – lines 24 and 25). The substrate of a head module can be canted in two senses: 1 - embodiment such as in figure 9 where a substrate such as substrates 202 and 212 are mounted an angle, and 2 – the module is mounted to an actuator with two degrees of movement freedom (column 14 – line 40) indicating that the substrate can be moved to be canted. A core and a coil are inherent part of thin film heads. As to claim 15, note figure 9.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3, 8, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwarz et al.

As per Claims 3 and 13

Schwarz clearly establishes that a head module may have more than one servo head and sets forth 2 servo heads but does not expressly refer to at least 3 servo heads.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the head module have at least 3 servo heads. The motivation would have been: Schwarz sets forth that the number of servo heads can be adjusted to correspond to the number of servo tracks provided to a format of magnetic tape anticipated to be read by the head module. And setting forth that more than one servo head may be utilized, and expressly setting forth 2 servo heads, will be inherently suggestive of an immediately adjacent number like 3.

As per Claim 8

Official Notice is given that it was notoriously old and well known in the art that a desired number of gaps can be provided via individual gaps on individual head structures or via plural gaps on individual head structures.

It would have been obvious to have the first and second thin film servo heads of Schwarz each include plural gaps. The motivation would have been: providing a thin film servo head with plural gaps provided advantages for well defining the position of gaps relative to each other or allowing combining of assembly processes.

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6. Claims 2, 5, 11, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwarz et al in view of Albrecht et al (U.S. 6,282,051). Schwarz does not expressly disclose that the servo read heads verify time-based servo marks.

Albrecht discloses a magnetic tape system utilizing time-based servo marks.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the servo read heads of Schwarz verify time-based servo marks. The motivation would have been: time-based was a standard servo information format for use in conjunction with tape systems.

7. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schwarz et al in view of Albrecht et al (U.S. 6,331,920) and/or Barndt et al (U.S. 6,222,698). Schwarz does not appear to expressly disclose that both a canted substrate and a non-canted substrate can be used for a first thin film servo head apparatus and a second thin film servo head apparatus respectively.

Albrecht (figure 2) and Barndt (figure 4) both disclose combining a canted substrate and a non-canted substrate for a first thin film servo head apparatus and a second thin film servo head apparatus respectively.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide Schwarz with a canted substrate and a non-canted substrate for a first thin film servo head apparatus and a second thin film servo head apparatus respectively. The motivation would have been: Albrecht and Barndt show that canted and non-canted servo head assembly substrates could be used in combination to provide the desired combination of head gaps to tape orientations.

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***Allowable Subject Matter***

8. Claims 9 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jefferson A. Evans whose telephone number is 571-272-7574. The examiner can normally be reached on Monday to Friday, 9:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Thi Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



JAE  
September 27, 2006

Jefferson A. Evans  
Primary Examiner  
Art Unit 2627

**JEFFERSON EVANS  
PRIMARY EXAMINER**